Question5

Solution :

Because $\langle 1,1,-1\rangle$ can determine a 2 degree polynomial and $\langle 1,0,-1,2,-1\rangle$ can determine a 4 degree polynomial so x can determine a 2 degree polynomial.

We can assume $x = \langle a,b,c\rangle$, we can get:

$$\begin{cases} a = 1 \\ a+b = 0 \\ -a+b+c = -1 \\ -b+c = 2 \\ -c = -1 \end{cases}$$

Solving the equation, we can get: $a = 1, b = -1, c = 1$.

So, $x = \langle 1,-1,1\rangle$